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DOCKET NO.: ISIS-4502

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Richard H. Tullis

Serial No.: 08/078,768

Group Art Unit: 1804

Filing Date: June 16, 1993

Examiner: J. Martinell

For: Oligonucleotide Therapeutic Agent and Methods of Making Same

DATE OF DEPOSIT: April 17, 2001

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TYPED NAME: John W. Caldwell
REGISTRATION NO.: 28,937

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Assistant Commissioner for Patents
Washington DC 20231

Sir:

TRANSMITTAL LETTER

Transmitted herewith for filing in the above-identified patent application is:

- ☒ Supplemental Information Disclosure Statement.
 - ☒ Attached Form 1449.
 - ☒ A copy of each reference as listed on the attached Form PTO-1449 is enclosed herewith.
- ☒ Other Material as follows: Submission Regarding European Opposition and European Opposition Papers to EP 0092574[B1].

- ☒ The Commissioner is authorized to charge payment of the following fees and to refund any overpayment associated with this communication or during the pendency of this application to deposit account 23-3050. This sheet is provided in duplicate.
- ☐ The Foregoing Amount Due for Filing this Paper.
- ☒ Any additional filing fees required, including fees for the presentation of extra claims under 37 C.F.R. 1.16.
- ☒ Any additional patent application processing fees under 37 C.F.R. 1.17 or 1.20(d).

SHOULD ANY DEFICIENCIES APPEAR with respect to this application, including deficiencies in payment of fees, missing parts of the application or otherwise, the United States Patent and Trademark Office is respectfully requested to promptly notify the undersigned.

Date:

April 17, 2001

John W. Caldwell
Registration No. 28,937

Woodcock Washburn Kurtz
Mackiewicz & Norris LLP
One Liberty Place - 46th Floor
Philadelphia PA 19103
Telephone: (215) 568-3100
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PATENT

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In Re Application of:

Richard H. Tullis

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TYPED NAME: John W. Caldwell
REGISTRATION NO.:

Board of Patent Appeals and Interferences
Commissioner of Patents and Trademarks
Washington DC 20231

STATEMENT UNDER 37 C.F.R. §3.73(b)

Molecular Biosystems, Inc., a corporation, states that it is:

- ☒ the assignee of the entire right, title, and interest; or
- ☐ an assignee of an undivided part interest

in the patent application/patent identified above by virtue of either:

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above.
- ☒ 1. The assignment was recorded in the Patent and Trademark Office at Reel 3941, Frame 0775. The assignment was again recorded in the Patent and Trademark Office at Reel 4079, Frame 0445 due to a name change of the assignee.

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AND INTERFERENCES

☐ 2. The assignment has not yet been recorded. A copy of the assignment is attached.
OR

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:

- i. From: _____ To: _____ The document was recorded in the Patent and Trademark Office at Reel _____, Frame(s) _____, or for which a copy thereof is attached.
- ii. From: _____ To: _____ The document was recorded in the Patent and Trademark Office at Reel _____, Frame(s) _____, or for which a copy thereof is attached.
- iii. From: _____ To: _____ The document was recorded in the Patent and Trademark Office at Reel _____, Frame(s) _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

☒ Copies of assignments or other documents in the chain of title are attached.

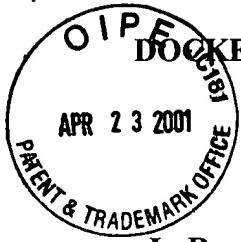
The undersigned (whose title is supplied below) is empowered to act on behalf of the assignee:


Signature

Name: Lloyd A. Rowland

Title: Vice President & General Counsel

Date: Feb. 7, 2001



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ASSISTANT COMMISSIONER FOR PATENTS,
WASHINGTON, DC 20231

John W. Caldwell
TYPED NAME: John W. Caldwell
REGISTRATION NO.: 28,937

Assistant Commissioner for Patents
Washington DC 20231

Dear Sir:

**SUBMISSION OF INFORMATION REGARDING
EUROPEAN PATENT OPPOSITION AND OBSERVATIONS**

The appeal in connection with this application was sought to be vacated in order that the Examiner be allowed to consider two issues. The first issue for the Examiner's attention relates to issuance of U.S. Patent 5,919,619. This patent issued from a continuation application to the present application, filed May 31, 1995. In that patent prosecution, the Examiner and applicant reached agreement as to thirteen claims. Except for a single limitation, claim 1 of the 619 patent is identical to claim 1 now under consideration. Claim 1 of the 619 Patent is limited to methods of downregulating protein by antisense oligonucleotides in cell cultures, while the claims here do not have the cell culture limitation. Many of the objective bases for the extant §112 rejection are applicable to uses of the invention under both *in vivo* and *in vitro* conditions. Consistency of

examination requires reconsideration by the Examiner and allowance of the present claims.

The second issue relates to an opposition brought against a European patent issued on an application claiming priority to a U.S. patent application, Serial No. 06/314,124, from which priority is also claimed in the present U.S. patent application. In that opposition, the European Opposition Division revoked European Patent 0092574 and a subsequent appeal of that decision did not reverse the holding.

The undersigned greatly regrets the volume of paperwork which attends this European proceeding and sincerely apologizes to the Examiner for obliging him to review this material. However, the undersigned feels obligated to provide the entire record available to him from the files of the European Patent Office. Accordingly, enclosed is a copy of the papers obtained from the European Patent Office relating to the opposition. Also enclosed are those patents and publications found in the European file, either as having been cited directly in one of the opposition papers or as having been appended to an affidavit or similar paper. Patents and publications which were made of record in this U.S. application heretofore are not submitted again in order not to burden the Examiner unnecessarily. An Information Disclosure Statement and form 1449 are submitted herewith directed to those patents and publications not already of record in this application.

The Examiner should note that the claims of the European Patent are different from those now pending in this U.S. application. In particular, the claims opposed were as follows:

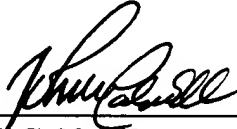
1. Therapeutic agent for selectively blocking the translation of m-RNA into a targeted protein, comprising a stablized oligonucleotide of 14 to 23 bases having a base sequence substantially complementary to a portion of the coding region of the mRNA coding for said targeted protein.
2. Therapeutic agent according to claim 1, characterized in that the oligonucleotide is in a phosphotriester form.

The Examiner is requested to assess for himself the grounds relied upon by the European Opposition Division and their relevance, if any, to the present claims. It is applicant's view that

the claims were revoked in that the Opposition Division was of the view that there was insufficient disclosure under the European patent laws for the claims to therapeutics. Under the European standards, the technical contribution was said not to "refer to the therapeutic use and thus the invention extends to technical subject matter not made available to the person skilled in the art by the application as filed."

Respectfully submitted.

April 17, 2001



John W. Caldwell
Registration No. 28,937

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